CLAIMS

What is claimed is:

1	1 1. A system comprising:	
2	a network including a plurality of compor	nents; and
3	a controller coupled to the network and op	perative to automatically
4	4 configure the components of the netwo	ork to perform a combined
5	5 action.	
1	1	
1	1 2. The system of claim 1 wherein the c	controller defines relationships
2	2 between the components to configure them to pe	erform a combined action.
1	1	
1	1 3. The system of claim 1 wherein each	resource is one of hardware
2	2 and software.	
1	1	
1	1 4. The system of claim 1 wherein the a	action includes providing a
2	2 network service.	
1	1	
1	The system of claim 1 wherein the c	controller automatically
2	2 configures the network in response to detecting a	an event.
1	1	
1	1 6. The system of claim 5 wherein the 6	event is generated in response to
2	2 automatically detecting increased network usage	e.
1	1	
1	7. The system of claim 6 wherein the r	network includes a plurality of
2	2 resources, the controller assigning additional resources.	ources to provide a network

3	service that is already being provided by other resources in response to the
4	event.
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1	8. The system of claim 5 wherein the event is generated in response to
2	the controller detecting demand for a new network service.
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1	9. The system of claim 8 wherein the demand for the new network is
2	issued in response to a command issued by a user of the system.
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1	10. The system of claim 1, further comprising:
2	a console coupled to the controller operative to provide an interface that
3	allows a human user to interact with the controller.
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1	11. A method comprising:
2	logically grouping a plurality of components at a data center into a single
3	meta-server;
4	defining one or more hierarchical relationships between each of said
5	components including one or more associations, dependencies and/or
6	prerequisites, said hierarchical relationships providing information related to
7	network operations at said data center; and
8	using said information for one or more network management functions at
9	said data center.
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1	12. The method as in claim 11 wherein a first one of said defined
2	hierarchical relationships comprise:
3	a first zone or resource collection comprised of a first subset of said
4	plurality of components.

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1	13. The method as in claim 12 wherein a second zone or resource
2	collection of said defined hierarchical relationships comprise:
3	a second zone comprised of a second subset of said plurality of
4	components.
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1	14. The method as in claim 13 wherein a third one of said defined
2	hierarchical relationships comprise:
3	an interconnect logically connecting said first zone and said second zone.
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1	15. The method as in claim 12 wherein one of said components grouped
2	within said first zone is a Web server.
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1	16. The method as in claim 13 wherein one of said components grouped
2	in both said first zone and said second zone is a firewall.
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1	17. The method as in claim 11 wherein one of said components is a router
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1	18. The method as in claim 11 wherein one of said network management
2	functions is to initialize one or more of said system components at said data
3	center and said defined hierarchical relationships between each of said system
4	components is used to determine an appropriate order in which to initialize said
5	one or more components.
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1	19. The method as in claim 18 wherein initializing comprises rebooting
2	one or more of said system components.
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1	20. The method as in claim 18 wherein initializing comprises restarting	
2	one or more of said system components.	
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1	21. The method as in claim 18 wherein initializing comprises	
2	reconfiguring one or more of said system components.	
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1	22. A meta-server comprising:	
2	a plurality of front end Web servers to process client requests for Web	
3	pages;	
4	a plurality of back-end servers to perform various back-end processing	
5	functions associated with said client requests;	
6	a controller to define one or more logical hierarchical relationships	
7	between each of said components including one or more associations,	
8	dependencies and/or prerequisites, said hierarchical relationships providing	
9	information related to network operations at said data center and to use said	
10	information for one or more network management functions at said data center.	
1		
1	23. The meta-server as in claim 22 further comprising:	
2	a firewall communicatively coupled between said front-end Web servers	
3	and said back-end servers to analyze and filter data traffic directed towards said	
4	back end servers,	
5	said controller further defining one or more additional logical hierarchical	
6	relationships between said firewall and said front-end and/or said back-end	
7	servers.	
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1	24. The meta-server as in claim 23 further comprising:	

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a router communicatively coupled between said front-end Web servers, 2 3 said back-end servers and an external network, said router to process data traffic 4 according to a network addressing protocol, 5 said controller further defining one or more additional logical hierarchical 6 relationships between said router, said front-end servers, said back-end servers 7 and/or said firewall. 1 1 25. The meta-server as in claim 22 wherein said front-end servers and said back-end servers are physically configured within a single unitized 2 3 platform. 1 26. The meta-server as in claim 25 wherein said front-end servers and 1 2 said back-end servers communicate over a dynamically configurable backplane bus. 3 1 27. The meta-server as in claim 22 wherein said defined hierarchical 1 2 relationships comprise a first zone including said front-end Web servers, a 3 second zone including said back-end servers, and an interconnect logically 4 coupling said first zone with said second zone.

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28. The meta-server as in claim 24 wherein said defined hierarchical relationships comprise a first zone including said front-end Web servers, a second zone including said back-end servers, an interconnect logically coupling said first zone with said second zone, and an interconnect resource comprised of said firewall.

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1	29. An article of manufacture including program code which, when
2	executed by a machine, cause said machine to perform the operations of:
3	logically grouping a plurality of components at a data center into a single
4	meta-server;
5	defining one or more hierarchical relationships between each of said
6	components, said hierarchical relationships providing information related to
7	network operations at said data center; and
8	using said information for one or more network management functions at
9	said data center.
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1	30. The article of manufacture as in claim 29 wherein a first one of said
2	defined hierarchical relationships comprise:
3	a first zone comprised of a first subset of said plurality of components.
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1	31. The article of manufacture as in claim 30 wherein a second one of said
2	defined hierarchical relationships comprise:
3	a second zone comprised of a second subset of said plurality of
4	components.
,1	
1	32. The article of manufacture as in claim 31 wherein a third one of said
2	defined hierarchical relationships comprise:
3	an interconnect logically connecting said first zone and said second zone.
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1	33. The article of manufacture as in claim 30 wherein one of said
2	components grouped within said first zone is a Web server.

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1	34. The article of manufacture as in claim 31 wherein one of said	
2	components grouped in both said first zone and said second zone is a firewall.	
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1	35. The article of manufacture as in claim 29 wherein one of said	
2	components is a router.	
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1	36. The article of manufacture as in claim 29 wherein one of said network	
2	management functions is to initialize one or more of said system components at	
3	said data center and said defined hierarchical relationships between each of said	
4	system components is used to determine an appropriate order in which to	
5	initialize said one or more components.	
1		
1	37. The article of manufacture as in claim 36 wherein initializing	
2	comprises rebooting one or more of said system components.	
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1	38. The article of manufacture as in claim 36 wherein initializing	
2	comprises restarting one or more of said system components.	
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1	39. The article of manufacture as in claim 36 wherein initializing	
2	comprises reconfiguring one or more of said system components.	
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1	40. A method comprising:	
2	defining one or more logical hierarchical relationships between a plurality	
3	components on a network including one or more associations, dependencies	
4	and/or prerequisites, said logical hierarchical relationships providing	
5	information related to network operations; and	

6	executing a simulation of said network operations based on said
7	hierarchical relationships between said components.
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1	41. The method as in claim 40 further comprising:
2	storing different groups of said logical hierarchical relationships into one
3	or more tool sets, said tool sets usable for conducting said simulation.
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1	42. The method as in claim 41 further comprising:
2	using results of said simulation to design additional logical hierarchical
3	relationships between said components.
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1	43. The method as in claim 42 wherein designing additional logical
2	hierarchical relationships comprises optimizing said logical hierarchical
3	relationships between said components.
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1	44. The method as in claim 42 wherein said additional logical hierarchical
2	relationships are designed responsive to an inclusion of new components on said
3	network.
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1	45. A network management architecture defined by a series of
2	abstractions comprising:
3	a plurality of network resources;
4	one or more services, each comprised of a specified set of said network
5	resources;
6	a service collection comprised of two ore more services; and
7	a user interface providing information related to and control over said
8	service collection, said services, and/or said network resources to a user.

1 1 46. The network management architecture as in claim 45 wherein one of said resources is a Web server. 2 1 47. The network management architecture as in claim 46 wherein one of 1 2 said resources is a load balancer. 1 1 48. The network management architecture as in claim 47 wherein said Web server and said load balancer both are included in a particular service. 2 1 49. The network management architecture as in claim 46 wherein said 1 Web server is included in a particular service with a plurality of other Web 2 3 servers. 1 1 50. The network management architecture as in claim 45 wherein said user is provided with differing levels of access to said service collection, said 2 services, and/or said network resources, depending on a user group to which said user belongs. 4 1 1 51. The network management architecture as in claim 50 wherein said 2 user is provided with access to specified objects, properties and/or methods of 3 one or more of said services, service groups and/or resources based on access 4 privileges of said user group. 1 1 52. The network management architecture as in claim 51 wherein said 2 user interface dynamically displays to said user only those specified objects, properties and/or methods to which said user is permitted access. 3

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